Sustainable Science Letters

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Editorial

Sustainable Science: A need for better future

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Abstract

This inaugural issue of Sustainable Science Letters presents a multidisciplinary collection of articles advancing sustainability and environmental science. Highlights include studies on plant-based antimicrobials, microplastics in agriculture, avian chemical signaling, allelopathic phytochemicals, clay nanoparticles for remediation, and modified biochar for carbon sequestration. Together, these works reflect the journal's mission to promote innovative, science-based solutions for a sustainable future.

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1. Introduction

It is with great pleasure that we present the inaugural issue of Sustainable Science Letters—a multidisciplinary platform dedicated to advancing knowledge and innovative research in the realm of sustainability, environmental science, and applied life sciences. This first issue showcases a diverse and thought-provoking selection of manuscripts that reflect the journal's vision: to promote sustainable solutions grounded in scientific excellence. The issue begins with a study on the antioxidant and antibacterial potential of *Carissa spinarum* L. leaves, shedding light on the promising use of plant-based extracts for natural therapeutics and eco-friendly antimicrobial agents. Following this, a compelling review explores how microplastics infiltrate the food chain through agricultural practices, raising urgent questions about long-term ecological and human health impacts.

A fascinating manuscript delves into the role of chemical signaling in avian communication, emphasizing the intricate interplay between species behavior and environmental cues. Meanwhile, a systematic review highlights the potential of allelopathic phytochemicals as natural tools for sustainable agriculture, offering eco-compatible alternatives to synthetic agrochemicals. Also featured is a comprehensive review on clay mineral nanoparticles for heavy metal remediation, demonstrating how nanotechnology can support cleaner soils and sustainable land management. Complementing this is a forward-looking review on biochar chemical modification, focusing on its role in carbon sequestration and environmental remediation. Collectively, these contributions reflect the depth, innovation, and interdisciplinary approach that Sustainable Science Letters aims to foster. As the world faces complex environmental challenges, this journal aspires to become a hub for actionable science that bridges research, policy, and practice.

We thank the authors, reviewers, and editorial team for their invaluable support. We look forward to building a vibrant scientific community and publishing pioneering work that drives sustainable progress.